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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/705,863

11/13/2003

Yasuhiro Hibino

2003_1532A

6294

513

7590

03/20/2006

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EXAMINER

NGUYEN, DUC M

ART UNIT

PAPER NUMBER

2600

DATE MAILED: 03/20/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/705,863

Applicant(s)

HIBINO ET AL.

Examiner

Duc M. Nguyen

Art Unit

2685

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-14 is/are allowed.
- 6) ☒ Claim(s) 15 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on ____ is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Information Disclosure Statement

1. The references listed in the information disclosure statements submitted on 11/13/201 and 10/20/05 have been considered by the examiner (see attached PTO-1449).

Specification

2. The disclosure is objected to because of the following informalities:
 - "reluctance" should be changed to "reactance" on lines 20, 21 and 24 of page 6.Appropriate correction is required.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claim **15** is rejected under 35 U.S.C. 102(b) as being anticipated by **Camacho** (EP 0829918 A2).

Regarding claim **15**, **Camacho** discloses a matching unit coupled to an antenna which shows an capacitance to the VHF band and shows a inductance property to the UHF band (see Abstrat, Figs. 1, 5 and col. 5, line 42 – col. 6, line 23), comprising:

- an input terminal (see Fig. 7);
- an output terminal (see Fig. 7);

- a capacitor interposed between the input terminal and the output terminal (see Fig. 7 regarding capacitor C2 and col. 7, lines 15-41);
- a first inductor interposed between the input of the capacitor and the ground (see Fig. 7 regarding inductor L2 and col. 7, lines 15-41);
- a second inductor interposed between the output of the capacitor and the ground (see Fig. 7 regarding inductor L1 and col. 7, lines 15-41);
- wherein the first inductor show an capacitance property (negative j value) to the VHF band and shows a inductance property (positive j value) to the UHF band (see Fig. 5 and col. 5, line 42 – col. 6, line 23).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claim **15** is rejected under 35 U.S.C. 103(a) as being unpatentable by **Yamamoto** (US 6,933,984) in view of **Ogoro** (US 6,329,886).

Regarding claim **15**, **Yamamoto** discloses a matching unit (high pass filter 32) coupled to an UHF tuner and VHF tuner (see Fig. 4), comprising:

- an input terminal (see Fig. 4);
- an output terminal (see Fig. 4);

- a capacitor interposed between the input terminal and the output terminal (see Fig. 4 regarding elements of high pass filter 32);
- a first inductor interposed between the input of the capacitor and the ground (see Fig. 4 regarding elements of high pass filter 32);
- a second inductor interposed between the output of the capacitor and the ground via a capacitor (see Fig. 4 regarding elements of high pass filter 32);

Although the matching filter 32 in Yamamoto would allow passing signals with frequencies in both VHF band and UHF band, Yamamoto fails to disclose the first inductor shows an inductance to the UHF band and shows a capacitance property to the VHF band. However, **Ogoro** discloses an impedance matching method for setting values of reactances at optimum values at two separate frequencies in order to reduce electric-power loss (see col. 4, lines 17-65 and col.14, lines 10-69). Here, since **Ogoro** teaches several embodiments of the matching circuits (see Figs. 33A, 35-37) that could be utilized for the matching filter in **Yamamoto**, it would have been obvious to one skilled in the art at the time the invention was made to incorporate the above teaching of **Ogoro** to the matching filter 32 in **Yamamoto** as well, for providing setting values of inductors and capacitors at optimum values at two separate UHF and VHF frequencies for reducing electric-power loss due to impedance mismatching. By doing so, based on the interpretation of the Figs. 2A-2B and paragraphs [0038] through [0040] of the specification, the inductors (including first inductor) of the matching filter 32 in Yamamoto would show an inductance to the UHF band and would show a capacitance property to the VHF band (see **Ogoro**, Fig. 11A – Fig. 11C and col. 12, lines 19-63).

Allowable Subject Matter

7. Claims 1-14 are allowed.
8. The following is a statement of reasons for the indication of allowable subject matter: As to claim 1, the cited prior art fails to disclose or make it obvious a matching unit which comprises components as specified in the claim, wherein a non-obvious feature comprises a switching means and a first inductor with property as specified in the claim.

Conclusion

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

US006472953B1 to Sakuragawa,

US005917387A to Rice et al,

US004153887A to Poppa,

US005917387A to Cruz et al,

US006903783B2, US006864924B2 and US005978663A to Yamamoto,

US005463362A to Kitaguchi,

US004596044A to Aoki,

US004731877A to Moon,

JP354104219A to Shinagawa et al,

JP02001359005A to Yoda et al.

10. **Any response to this action should be mailed to:**

Commissioner of Patents and Trademarks

Washington, D.C. 20231

or faxed to:

(571) 273-8300 (for **formal** communications intended for entry)

(571)-273-7893 (for informal or **draft** communications).

Hand-delivered responses should be brought to Customer Service Window,
Randolph Building, 401 Dulany Street, Alexandria, VA 22314.

Any inquiry concerning this communication or communications from the examiner
should be directed to Duc M. Nguyen whose telephone number is (571) 272-7893,
Monday-Thursday (9:00 AM - 5:00 PM).

Or to Doris To (Supervisor) whose telephone number is (571) 272-7629.

Duc M. Nguyen, P.E.

Mar 8, 2006

A handwritten signature in dark ink, appearing to read 'Duc M. Nguyen', with a long horizontal flourish extending to the right.